

Application Serial No. 10/026,451
Atty. Docket No. 011758

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A semiconductor photo detecting device, comprising:
a semiconductor substrate having a flat side face; and
a photo absorption layer formed on said semiconductor substrate,
wherein an entire part of said flat side face is inclined to a line perpendicular to a principle plane of said semiconductor substrate; and
said flat side face is substantially perpendicular to an incoming photo signal,
wherein said flat side face is a cleavage face of said semiconductor substrate.

Claim 2 (Cancelled):

Claim 3 (original): The semiconductor photo detecting device as claimed in claim 1,
wherein said semiconductor substrate has another side face parallel to said flat side face.

Claim 4 (original): The semiconductor photo detecting device as claimed in claim 1,
wherein said semiconductor substrate is a III-V group compound semiconductor substrate, and said flat side face is one of a (110) plane and a (111) plane.

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Claim 5 (original): The semiconductor photo detecting device as claimed in claim 1, wherein said flat side face is inclined to a line perpendicular to said principle plane at an angle of 30° or less.

Claim 6 (original): The semiconductor photo detecting device as claimed in claim 4, wherein said principle plane is inclined to a (100) plane of said semiconductor substrate.

Claim 7 (original): The semiconductor photo detecting device as claimed in claim 1, wherein said side face is covered by an anti-reflection film.

Claim 8 (original): The semiconductor photo detecting device as claimed in claim 1, wherein said photo absorption layer is formed in a range in which a perpendicular line to said flat side face crosses.

Claim 9 (original): The semiconductor photo detecting device as claimed in claim 1, further comprising,

a first cap layer formed on said photo absorption layer; and
an ohmic electrode formed on said cap layer.

Claim 10 (original): The semiconductor photo detecting device as claimed in claim 1, further comprising:

a cap layer formed on said photo absorption layer; and

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a second conduction type region formed in a part of said photo absorption layer and said cap layer,

wherein said photo absorption layer and said cap layer are a first conduction type; and

said photo absorption layer is formed in a range in which a perpendicular line to said flat side face crosses.

Amended
Claim 11 (Withdrawn): A manufacturing method of a semiconductor photo detecting device, comprising,

a step of forming semiconductor layers including a photo absorption layer on an inclined semiconductor substrate,

a step of forming semiconductor photo detecting devices including said photo absorption layer by patterning said semiconductor photo detecting devices in multiple parts of said inclined semiconductor substrate,

a step of dividing said semiconductor substrate into multiple semiconductor photo detecting devices having one or more pairs of cleavage faces by cleaving said semiconductor substrate, and,

a step of forming an anti-reflection film on said cleavage faces.

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Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 1-4. These sheets, which include Figures 1-4, replace the original sheets including Figures 1-4. In Figures 1-4 the legend "Prior Art" has been added.